

- DETX (6):

and optical -coupling applications, the microlamp 10
ciency thermal print heads since the filament requires
temperature of 1300K. The silicon-nitride housing
provides an excellent wear resistance for contact with paper. The lamp can
also be the transmitter for an IC-fabricated optocoupler. The structure has
potential biomedical applications that are especially attractive because of the
lamp housing and the possibility of operation in liquid environments. It can
act as a black-body source for infrared energy, and it can be laid out in
planar-array form. If it faced a series of infrared (IR) detectors, this could
be very useful for measurements of IR absorption in intervening layers of
tissue or other materials.

Detailed Description Text - DETX (8):

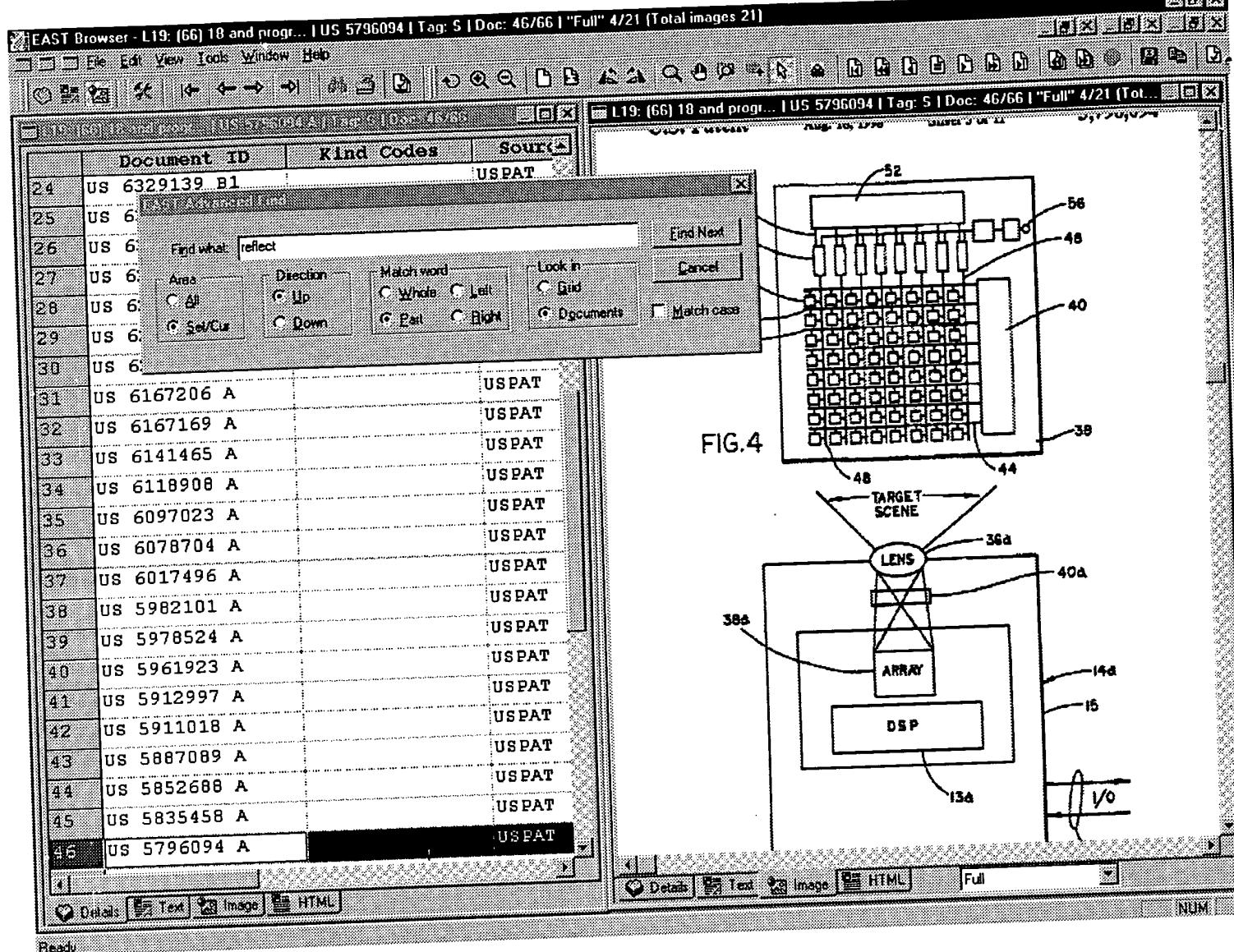
FIG. 2 shows a cross section of the actual device. In this structure, the
incandescent filament 12 is placed between an anisotropically etched silicon
V-groove 20 in substrate 18 and a low stress silicon-nitride window 16 that is
transparent to the filament black-body radiation. The window hermetically
seals the cavity 14 at the time of the deposition of silicon nitride. In this
structure, the V-groove silicon walls 21 and 22 are partial reflectors for the
filament radiation. The maximum depth of the V-groove is approximately 20 to
25 .mu.m.

Detailed Description Text - DETX (9):

Silicon is transparent for wavelengths longer than 1.1 .mu.m reflecting for
shorter wavelengths; therefore it is not a good mirror for infrared radiation.
The infrared reflectance of the silicon walls can be improved if they are
heavily doped. We expect that the wall reflectance can also be improved by the
deposition or growth of a thin SiO₂ film.



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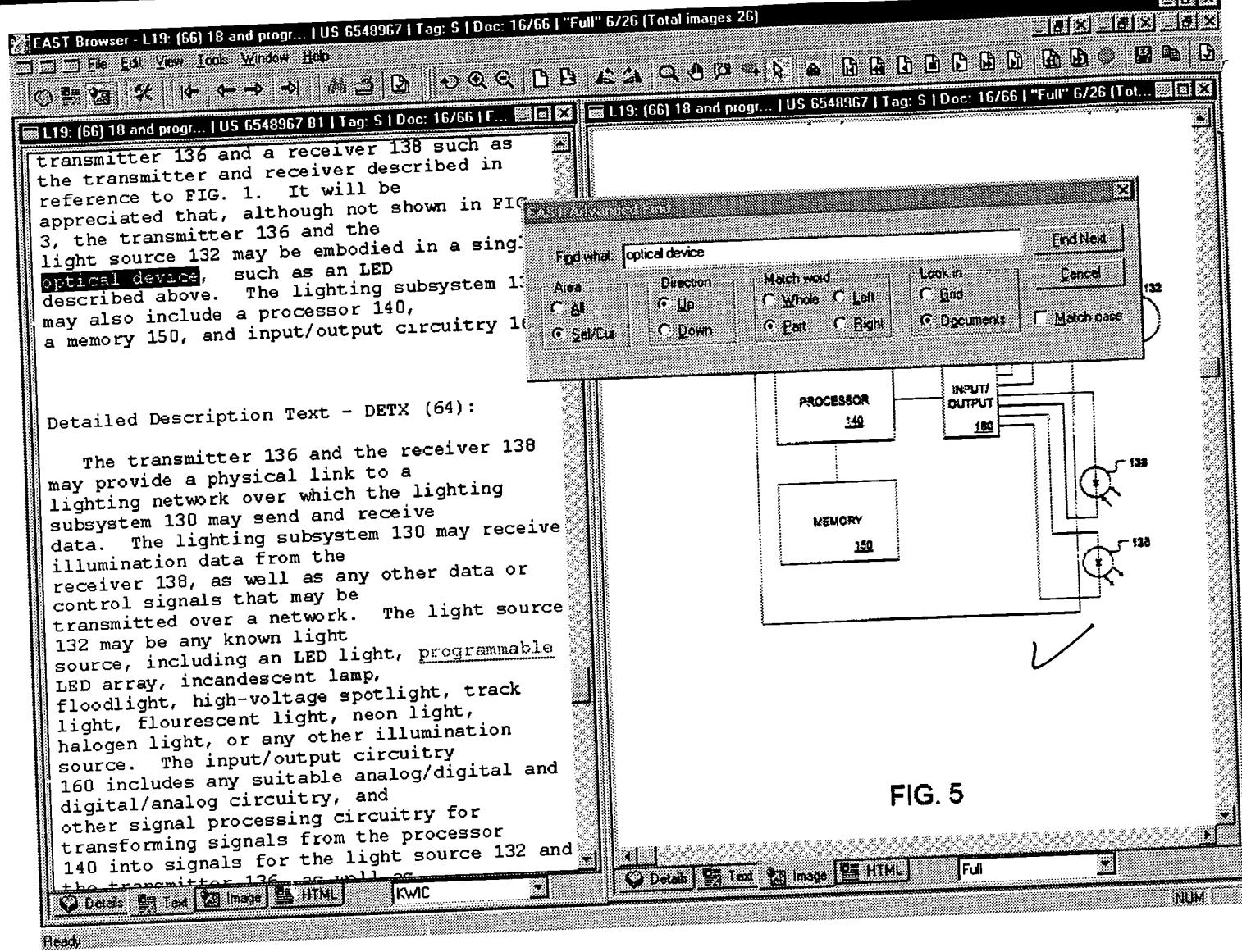
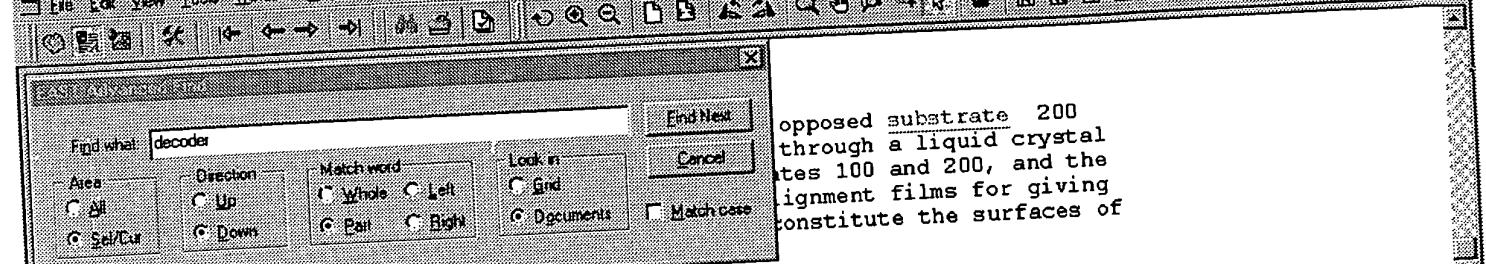


FIG. 5



Detailed Description Text - DETX (7):

Next, a manufacturing method of the TFT substrate 100 will be described with reference to FIGS. 2A-2E and 3A-3B. The right-hand portions of FIGS. 2A-2E and 3A-3B show a manufacturing process of a TFT that is to be formed in the pixel area 102 and the left-hand portions show a manufacturing process of TFTs to be formed in the driver circuit areas 103 and 104, respectively.

Detailed Description Text - DETX (8):

First, as shown in FIG. 2A, a silicon oxide film as an undercoat insulating film 121 for preventing impurity diffusion from a glass substrate 101 is formed on the glass substrate 101 at a thickness of 100-300 nm. The silicon oxide film may be formed by sputtering or plasma CVD in an oxygen atmosphere. In this embodiment, a 200-nm-thick silicon oxide film is formed by plasma CVD by using a TEOS gas as a material. If a quartz substrate is used as the substrate 101, the undercoat insulating film 121 can be omitted.

Detailed Description Text - DETX (23):

In the pixel area 102 of the TFT substrate 100 shown in FIG. 18A, at least one TFT is provided for and electrically connected to each pixel electrode. Examples of driver circuits formed in the driver circuit areas 103 and 104 are a shift register and an address decoder. Other circuits may also be formed when necessary.

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erroneous measurements.

Detailed Description Text - DETX (18):

When taking a reference measurement, respectively making calibrations, the gloss measuring device 1 is placed on reference surface 8 and a program stored in memory means 61 is started by means of inputting a control command via control component 62 of said gloss measuring device 1 and the color measuring device is controlled via control means 60 for taking the reference measurement.

Claims Text - CLTX (16):

16. A method according to claim 1, wherein geometric changes in said optical device are detected.

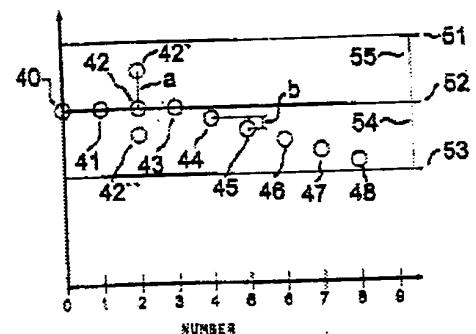


FIG. 4A

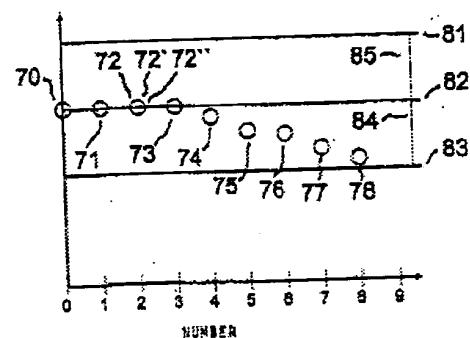


FIG. 4B

Text Viewer

#	Kind Codes	Source
1		US-PPGPUB
2		US-PPGPUB
3		US-PPGPUB
4	US 6482593 B2	USPAT
5	US 6452724 B1	USPAT
6	US 6406845 B1	USPAT
7	US 6208463 B1	USPAT
8	US 6108131 A	USPAT
9	US 5814524 A	USPAT
10	US 5020411 A	USPAT
11	US 4944211 A	USPAT

L17: (11) 16 and pattern | US 6452724 | Tag: S | Doc: 5/11 | "Full" 1/23 (Total images 23)

11 United States Patent
Hausze et al.

Patent No.: US 6452724 B1
Date of Patent: Sep. 17, 2002

(14) POLARIZER APPARATUS FOR PRODUCING A GENTILY POLARIZED BEAM OF LIGHT

(15) INVENTOR: Douglas B. Hausze, Orem, UT (US); Mark Grotjahn, Torrance, CA (US)

(16) Assignee: Microt, Inc., UT (US)

(17) Related: This application is a continuation of application number 09/353,141, filed on Mar. 24, 1999, now U.S. Pat. No. 6,482,593, which is a continuation of application number 08/945,240, filed on Sep. 29, 1997, now U.S. Pat. No. 6,406,845, which is a continuation of application number 08/620,846, filed on Mar. 13, 1996, now U.S. Pat. No. 6,208,463, which is a continuation of application number 08/510,813, filed on Feb. 10, 1995, now U.S. Pat. No. 6,108,131, which is a continuation of application number 08/452,424, filed on May 22, 1995, now U.S. Pat. No. 5,814,524, which is a continuation of application number 08/204,110, filed on Mar. 1, 1996, now U.S. Pat. No. 5,020,411, which is a continuation of application number 08/144,211, filed on Oct. 23, 1993, now U.S. Pat. No. 4,944,211.

(18) Appl. No.: 09/353,141
Filing Date: Mar. 24, 2000
Priority Data: U.S. Appl. No. 08/945,240, filed Sep. 29, 1997; U.S. Appl. No. 08/620,846, filed Mar. 13, 1996; U.S. Appl. No. 08/510,813, filed Feb. 10, 1995; U.S. Appl. No. 08/452,424, filed May 22, 1995; U.S. Appl. No. 08/204,110, filed Mar. 1, 1996; U.S. Appl. No. 08/144,211, filed Oct. 23, 1993.

(19) Examiners: Chai, J.
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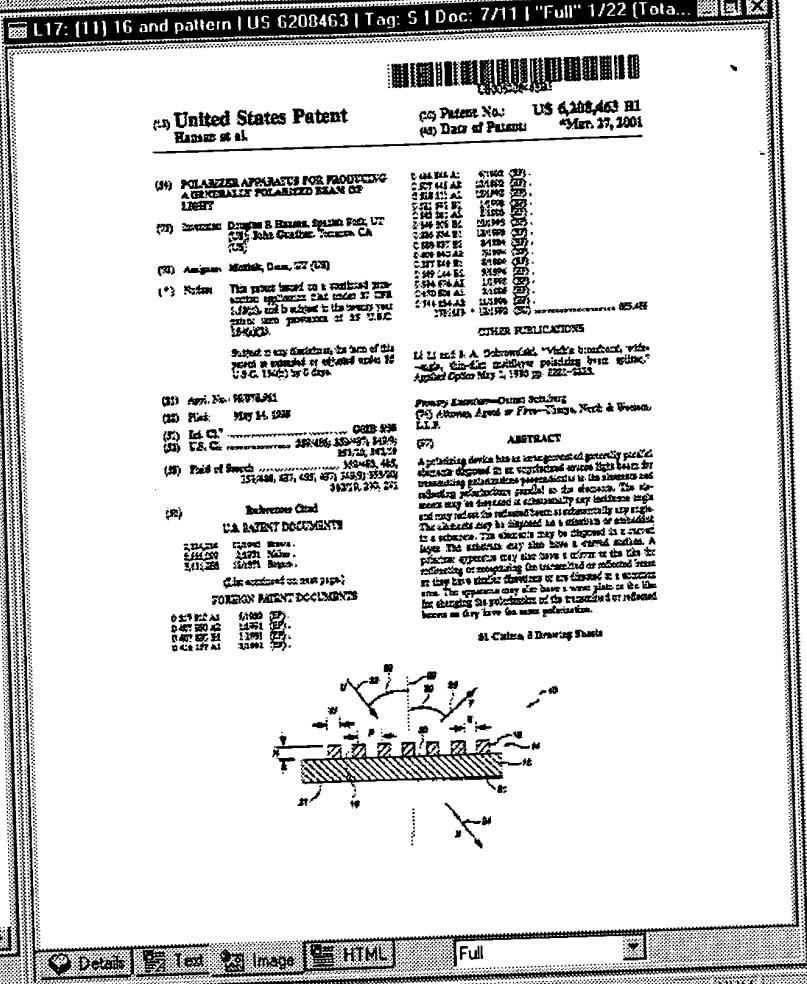
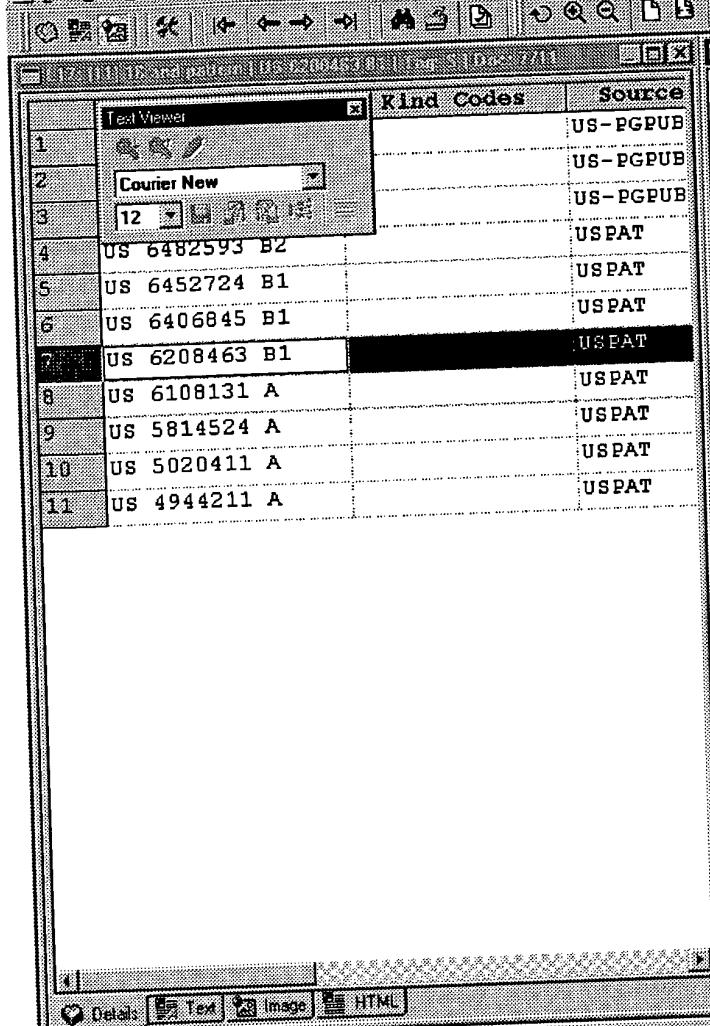
22 ABSTRACT

An optical device has an arrangement of generally parallel polarizers disposed in an exploded or active state for transmitting polarization complementary to the elements and including polarization parallel to the elements. The elements may be disposed at substantially any angle to each other and may include the same polarization or different polarizations. The elements may be disposed as a substrate or contained in a substrate. The elements may be disposed in a curved layer. The substrate may also have a curved layer. The polarizer elements may also have a layer on the substrate containing polarization complementary to the elements or they may include directions or an angle to a common axis. The device may also have a wave plate or the like for changing the polarization of the transmitted or reflected beams to have the same polarization.

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(19) Surface optical waveguide optics can also advantageously be developed with the method in accordance with the present invention. In this way confocal, sector-shaped pattern structures or also lens-shaped recesses can be created the focus of which lies in the surface optical wave guide and is oriented to, for example, a narrow **filament**-shaped or strip-shaped optical wave guide or optical wave guide section.

(20) Mirror surfaces of concave mirrors, concave mirror arrays, optical grids, etc. can be produced by the method. The structure can be made directly in high-quality reflective metal surfaces, for example, of silver or chromium, or they can be produced on a material that can be later mirrored. The surface can advantageously be vacuum-mirrored by feeding the substrate into a vacuum-coating device of the vacuum chamber after completion of the melting process.

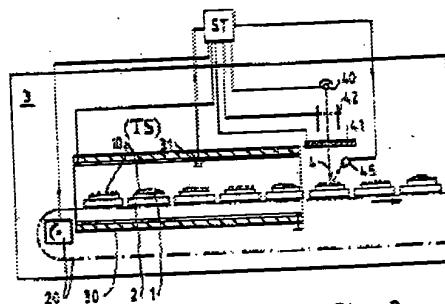


Fig. 2

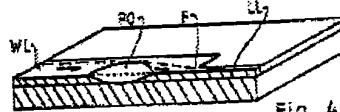
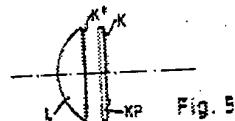


Fig. 4



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(14) POLARIZING APPARATUS FOR PRODUCING A GENERALLY POLARIZED BEAM OF LIGHT

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(73) Assignee: Monitek, Orem, UT (US)

(14) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

This patent is subject to a terminal disclaimer.

(21) Appl. No. 09/603,249

(22) Filed: Jun. 26, 2000

Related U.S. Application Data

(52) Division of application No. 09/078,613, filed on May 14, 1998, now Pat. No. 6,108,131.

(51) Int. Cl. 7 G02B 5/30; G02B 27/28

(52) U.S. Cl. 359/486; 359/487; 359/488; 359/489; 359/490

(58) Field of Search 359/352, 483, 359/485, 488, 487, 494, 493, 496, 497, 353/20; 362/19

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(List continued on next page.)

Primary Examiner—Ricky D. Shafer
(74) Attorney, Agent, or Firm—Thorpe North & Western

(57) ABSTRACT

A polarizing device has an arrangement of generally parallel elements disposed in an unpolarized source light beam for transmitting polarizations perpendicular to the elements and reflecting polarizations parallel to the elements. The elements may be disposed at substantially any incidence angle and may reflect the reflected beam at substantially any angle. The elements may be disposed on a substrate or embedded in a substrate. The elements may be disposed in a curved layer. The substrate may also have a curved surface. A polarizer apparatus may also have a mirror or the like for redirecting or reemitting the transmitted or reflected beam so they have similar directions or are directed to a common area. The device may also have a wave plate or the like for changing the polarization of the transmitted or reflected beams so they have the same polarization.

56 Claims, 7 Drawing Sheets

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